PROGRESS REPORT #7

ERTS - 1 PROPOSAL MMC NO. 204

CONTRACT NO. NAS5-21747

8 July 1973

TITLE: "To Map the Distribution of Glaciofluvial Deposits and Associated Glacial Landforms"; GSFC ID ST 354

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PROBLEMS:

1. The usual delay in receiving products, especially color composites, continues to slow progress. Winter imagery and early spring imagery received recently has been spotty and cloud covered.
2. Color composites prepared by the General Electric Company had good color but very poor registration and only fair resolution, so that they were not usable at the 'GEMS' facility in Valley Forge, Pa.
3. Due to continuing bad weather coinciding with ERTS-1 passes, no good imagery of the State has been obtained during late spring and early summer, 1973.

ACCOMPLISHMENTS:

Four days were spent in June at the General Electric Company 'GEMS' facility in Valley Forge, Pa., to establish electronic signatures for Glacial Deposits and related landforms, including active, inactive and reclaimed pit areas. Since the GE color composites were not usable, as stated under 'Problems', NASA-generated products were used. Attempts to establish reliable signatures from the ERTS imagery were not successful, due to the quality of the composites; color and density variations within the transparency caused signatures to be invalid outside the cursor area. Signatures obtained using Vinten CIR 70 mm transparencies were apparently better, but were not reliable when applied to adjacent 70 mm frames because of variations in density.

Many 35 mm slides were made of the TV view screen for later study, which confirmed the general unreliable nature of signatures thus attempted. GEMS personnel were hopeful that more reliable signatures might be obtained in the future, using better color composites.

Continued study of excellent U-2 CIR underflight photography using stereoscopic techniques has added to the knowledge of statewide glacial formations. U-2 coverage of a wide band of the State was obtained 24 March and just recently received. This photography is of generally excellent quality.

PLANNED FOR NEXT PERIOD:

June 3 underflight photography should be relatively cloud free and will be analyzed when received. This coverage will supplement and add to previous flights, so that about three-fourths of the State will be covered. It is hoped that additional coverage may be obtained by U-2 flights in August or early September.

Visual analysis of ERTS-1 composites will be made when good products are received. Color composites of several scenes were ordered on March 15.

A 1:1000,000 mosaic of the State is being assembled from imagery obtained February 10, 11 and 27. Prints will be furnished to several State agencies presently interested in various disciplinary uses of ERTS imagery.